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## GRADUATE WORK IN ECONOMICS

### I. THE STATUS OF ECONOMICS AS A SCIENCE

The two following premises are offered as a basis for the discussion which follows:

A. Economics as a science has not had a development during the past fifty years which is commensurate with the attention which has been given to it, as this interest expresses itself in the large number of educational institutions which give it a place in the curriculum, the large number of courses offered, and the remarkable increase in the number of students who pursue it as a subject of study in both the undergraduate and the graduate departments of these educational institutions.

B. Nor do economists exercise an influence on public thinking and economic policies of the nation, as expressed in legislation and business conduct, which is proportionate to the numbers who are supposed to be trained in correct economic thinking. Even the comparatively new and twilight-zone science of sociology, for whose followers the economist frequently has scientific indifference, is exercising more influence in social and economic conduct and policies than is economics.

The same situation is found in reference to political science.

### II. A SUGGESTED EXPLANATION FOR THIS CONDITION

A. There has been a strange adherence to the so-called classical doctrines of Smith, Ricardo, Mill, Malthus, and other "founders" of the science. We seem to be willing to accept their analyses and be content with their conclusions, notwithstanding the fact that we all agree that economics is the science of wealth production and consumption, or the science of business. We further agree that the present industrial organization, its institutions and agencies and forms of wealth, differ greatly from those existing at the time the "founders" wrote. This worship of the ancients is often

forcefully brought to our attention by the lack of respect which our opinions command from business men and legislators.

B. In the second place, the advance of the science has been retarded by the influence of the historical school of economists. There is no disposition on the part of any well-informed economist to deny the service rendered to the science by the work of the historical school. But the doctrines of this school have frequently been accepted too seriously and their methods followed too closely. This has expressed itself both in graduate and in undergraduate work, but especially in the former, as a long-continued and most detailed investigation into the past economic history for facts which would explain the economic institutions of the present. It is a common error to assume that everything in the present has had its precursors in the past. This is the baneful influence of the biological concept and method on the social sciences. The evolutionary concept suggested a method of investigation which was readily accepted, and applied to many sciences, but to none with more unfortunate results than to the social sciences. A product of social and economic evolution is not its own justification, even if it has evolved from other social and economic "organisms." But, as a matter of fact, present economic institutions cannot be traced back to some primordial form, as is true of many plants and lower animals. Doctoral dissertations and other economic investigations during the past several decades illustrate many attempts to do this, but such efforts do more credit to the ingenuity and industry of the investigators than to their understanding of the true character of present economic institutions.

### III. THE NEEDS OF ECONOMICS AS A SCIENCE

The most pressing single need of economics as a science is a careful inductive study and synthesis of present economic phenomena—a marshaling of the inherently correlated facts of particular phases of the subject, and the rational, necessary deductions which follow. Indeed, there is at hand a surplus of economic facts. We already have more facts than we can interpret. An introspective analysis and interpretation of these facts

is needed. As teachers we are continually emphasizing to the student the importance of developing his analytical faculties, but strangely enough the student is seldom encouraged to learn how to generalize properly. Analysis must, of course, precede synthesis, but economics, of all sciences, needs proper synthesis or generalization. The science is one of such great complexity—that is, one in which so many forces and agencies operate at different times and with such varying intensity—that it requires the most careful reasoning to select the important forces and to evolve their particular importance with respect to different times and places. Economics, as it is pursued by many of its students, is too often like a ship without a home port, or a railway without a terminus.

#### IV. SOME PRESSING ECONOMIC PROBLEMS FOR ADVANCED STUDENTS

As illustrating the preceding status and needs of economics, let us consider some of the economic problems which are awaiting a solution.

A. *The railway problem.*—The regulation of railways is ultimately a question of the railway rate or the charge for transportation. Do you know of a first-rate book, at least in the English language, which treats of transportation in its purely economic aspects? We have many books describing the historical development of railways, waterways, and highways, but is transportation treated in the books on the subjects or in the classroom discussions primarily as an economic agency in its relation to other economic forces and to prices and products? Are students encouraged to think of the railway rate as a price? Do graduate students attempt an application of the principle of price determination, observing and understanding the applications and limitations of competition and monopoly price principles, to the railway price? Is the railway studied as a business unit with respect of large- and small-scale production, or, satisfied with glib generalizations that the railway is a natural monopoly, do we proceed to a recitation of the number of miles built in each decade, or perchance to a reading of the decisions of the Interstate Commerce Commission, or probably to the more entertaining description of

how the Erie was looted or how the Rock Island or the San Francisco was watered?

B. *Price fluctuations and price determinates.*—How many advanced students or their instructors ever get beyond the consideration of the crudest statement of the quantity theory of money or some slight modification in accounting for the fluctuations in prices? It is easier and more entertaining to accept the newspaper explanation that such changes are due to demand and supply, or to the trust. Is there any adequate analysis made of the numerous factors which determine price in addition to the cost of production and demand utility? Do our students understand the real influence of competition in price determination, or the desirable scope which monopoly, co-operation, and competition should have in fixing prices? A striking illustration in this particular is that which occurs in connection with fire-insurance rates. Competition, as commonly understood, has no place in determining the price of fire insurance. Yet there is not a state in the Union which does not encourage and even require competition as the force to determine this price.

C. *The tariff question.*—In this question we find a bewildering confusion in the thinking of economists and graduate students, due largely to a failure to distinguish the purely economic from the political considerations. Other examples might be cited to show the prevalent indifference or incapacity on the part of graduate students to grasp intelligently the fundamental issues of many economic questions.

#### V. WHY GRADUATE STUDENTS DO NOT ATTACK THESE PROBLEMS

What are the reasons why graduate students do not or cannot attack these problems in a thorough manner?

A. In the first place, such students are too often permitted or encouraged by their instructors, who have become tools of the machine of formalized education, to continue the undergraduate method of descriptive work and of easy and inadequate generalizations. Such students are set to work to collect more and more facts in the forms of reports or theses, and are not compelled to organize this knowledge. At the end of this period of pseudo-

research the doctoral dissertation is often judged by the number of its pages, by the extent of the bibliography or the frequency of citations to authority, and by the abundance of footnotes. A consummation devoutly to be hoped for is a doctoral thesis with no footnotes and with a bibliography limited to original sources, occupying a space of less than a hundred pages.

B. In the second place, the graduate student even does not use the true economic reasoning and principles in his graduate work, because in the advanced undergraduate courses the fundamental principles with which he made an acquaintance in his course in beginning economics are never brought to bear on his study of the subjects in his advanced undergraduate courses. That is, there is often not only inadequate training in the fundamental course, but there is also a failure to apply these principles in the later more advanced work. The student, in studying transportation or money or taxation, is often permitted to pursue these subjects as if they had no relation to what in theory is the "preparatory course." As a result the fundamental course is no more a preparation for the advanced courses than is a course in history, Greek or physics.

#### VI. EMPHASIS ON DESCRIPTIVE ASPECT

The emphasis that is too frequently laid on the purely descriptive aspect of economics is due to a variety of causes:

A. In the first place, this descriptive work is more interesting and requires less mental effort on the part of both instructor and student. For this reason such courses are popular, and with the present-day public interest in economic questions a large number of students elect courses in economics. This popularity brings its reward both to the institution and to the instructors. In educational work we are scarcely beyond the stage of valuing things on other than the quantitative basis. The department and the instructor in universities are frequently measured in their value by the number of students which they draw. We do not like to acknowledge that competition exists among departments and universities, nor that we are quantitatively measuring a thing which can only be measured in a qualitative manner.

B. In the second place, the fact that a large number of students go to the universities has, as a result, a tendency to encourage the giving of popular and entertaining courses. It has become the fashion for young men and women to go to college, and it now requires some considerable effort and ingenuity for any young man or woman who enters college to escape having conferred upon him a Bachelor's degree. The result is that many enter college and later go into advanced work, who either have no preparation or no aptitude to do the critical thinking which the advanced subjects in economics require. It does not follow that one should lament the fact that university education is becoming increasingly popular. A people who are endeavoring to develop a real democracy should encourage such a tendency, but it is not necessary for instructors to put forth useless efforts to simplify and make easy what is complex and difficult. The rank and file of students in American universities will respond to the standard set for them by an intelligent and wise teacher. Doubtless, with the large numbers going to college, a certain minority do reach the point of "diminishing returns" under any proper system of intellectual production before the Senior year, and certainly a fair minority of those who go into graduate work in economics have previously reached such a point.

C. In the third place, an examination of the requirements to enter graduate work in American universities shows that even a very limited amount of undergraduate work is required. Again comes to the front the quantitative aspect of measuring educational work. The requirement for graduate work often expresses itself as so many hours, frequently 6 or 12, in a subject which is to be pursued in the graduate department. The weakness of such a plan is that there is no discrimination made as to the character or quality of the preparatory work. A general Sophomore course, for example, in economics and a course in transportation are an inadequate preparation for a graduate course in money. What is needed is a more thorough training in the Junior and Senior years in fundamental courses. The undergraduate curriculum in economics needs an enrichment by a process of impoverishment—that is to say, a reduction in the number of courses and an enrich-

ment in their content, instead of a progressive multiplying of courses, which leads to a division of the fields of economic knowledge with the substance becoming more meager. This practice leads to the filling in with descriptive detail.

With the development of colleges of commerce there is an opportunity to remove many courses which are now given in the undergraduate department. Even if the student is to enter the college of commerce, assuming it to be a professional school, he is better prepared for his work in so-called "applied economics" if he has had a limited number of substantial courses based upon his chief course in the principles of economics.

In time, as these colleges of commerce find their place in the educational system, it may well happen that the only true graduate work in economics will be done in connection with such colleges. They promise a rich field for real research, and as they become differentiated from the college of arts and also from each other, there will probably be found a number of colleges of commerce in this country which will be the true centers of graduate work in economics.

Wherever the graduate work in economics is to be done, the science of economics will continue to be what it always has been in fact, viz., a subject requiring the most rigid mental discipline and the highest intellectual qualities. No amount of finesse on the part of instructors can simplify its inherent character of complexity.

The first great school of economists, the Physiocrats, set forth its principles in the *tableaux économique*, and if in these degenerate days of the science it threatens to change from *tableaux économique* to "tabloid economics" and is prescribed by its doctors in harmless doses, warranted not to injure the most delicate constitution of intellectual infants, it is no fault of the science, but rather of the false doctors.

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